Applicant: Swarn S. Kalsi et al. Attorney's Docket No.: 05770-170001 / AMSC-546

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## REMARKS

In our previous reply, filed February 4, 2004, we cancelled claims 20-29 and 37-41 without prejudice. We acknowledge from the Examiner's Advisory Action (mailed February 23, 2004) that the cancellation of these claims were entered.

As indicated above, we have amended independent claims 1 and 9 to recite that the stator coil support defines the axial passage and is configured to transfer heat from the stator coil assemblies. We have also amended independent claim 30 to recite that the non-magnetic, thermally-conductive heat sinking members, in aggregate, define an axial passage for receiving a rotor assembly and is configured to transfer heat from the stator coil assemblies.

## **Prior Art Rejections**

## Independent claims 1 and 30

The Examiner rejected independent claim 1 as anticipated by either Beerman or Boer. In paragraph 16 of the office action (Response to Arguments), the Examiner argued that Beerman discloses "a cylindrical hollow member made of non-magnetic steel, which is inherently thermally conductive." We submit however that neither Beerman nor Boer disclose a stator coil support structure that defines an axial passage for receiving a rotor assembly and is configured to transfer heat from the stator coil assemblies, as is required by amended independent claims 1 and 30. In the Advisory Action, the Examiner argued that the element construed in Beerman to be the non-magnetic, thermally-conductive stator coils support was not the inner hollow cylinder 4, but the hollow cylindrical member 2. However, as can be seen most clearly in Figs. 1, 2, 4, and 6, hollow cylindrical member 2 does not define the axial passage for receiving the rotor assembly.

Turning to Boer, it is the Examiner's position that Boer's slot teeth 2 represent a non-magnetic, thermally-conductive stator coil support. But, Boer's slot teeth do not define the axial passage for receiving the rotor assembly. Furthermore, Boer's slot teeth do not transfer heat from the stator coil assemblies. Indeed, the structure in Boer's machine that transfers heat from

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the stator coil assemblies are the lamination segments 1, a magnetic material, and the wedges 12, 14 which are not thermally conductive.

For the reasons stated above, we submit that independent claims 1 and 30 are patentably distinct over both Beerman and Boer.

The Examiner also rejected dependent claims 2-8 and 31-36 as unpatentable over one of Beerman and Boer in view of one or more of Albright, Denk, Laskaris, and Mariner. However, none of these secondary or tertiary references disclose the features discussed above that were found to be missing in independent claims 1 and 30. We submit, therefore that these dependent claims are patentable for at least the same reasons that independent claims 1 and 30 are patentable.

## Independent claim 9

The Examiner rejected independent claim 9 as unpatentable over Boer in view of Cooper. The Examiner acknowledges that Boer does not disclose a superconducting rotor but argues that Cooper discloses a refrigerated superconducting rotor. We submit however that neither Boer nor Cooper disclose a non-magnetic, thermally-conductive stator coil support structure that defines an axial passage for receiving a rotor assembly and is configured to transfer heat from the stator coil assemblies, as is required by independent claim 9. As stated above, Boer's slot teeth do not define the axial passage for receiving the rotor assembly. Furthermore, Boer's slot teeth do not transfer heat from the stator coil assemblies. Cooper adds nothing to the features found to be lacking in Boer. For the reasons stated above, we submit that independent claim 9 is patentably distinct over Boer in view of Cooper.

The Examiner also rejected dependent claims 10-19 as unpatentable over Boer in view of Cooper and further in view of one or more of Albright, Denk, Laskaris, Mariner. However, none of these tertiary or quaternary references disclose the features discussed above that were found to be missing in Boer and Cooper. We submit, therefore that these dependent claims are patentable for at least the same reasons that independent claim 9 is patentable.

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Enclosed is a Petition for Extension of Five Months Time along with a check for \$2,010.00 for the required fee. This supplemental amendment is being filed concurrently with a Request for Continued Examination. Please apply any other charges or credits to deposit account 06-1050.

Respectfully submitted,

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Date: September 1, 2004

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